

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Submitted with this Amendment is an Abstract of the Disclosure.

The comment at the top of page two of the Official Action concerning the claim for priority to the earlier filed European application is noted. This application was filed under 35 U.S.C. § 371 as a U.S. national stage application based on an international application filed on October 21, 2004. That international application was filed within one year of the European priority application, and the present U.S. national stage application was filed within 30 months of the European priority application. Thus, the claim for priority to the European application is proper and effective. In the event Examiner Weeks has any further questions regarding this matter, the undersigned kindly asks the Examiner to telephone the undersigned at the number noted on the last page of this paper so that any remaining questions can be addressed.

Appreciation is expressed to Examiner Weeks for the indication that Claims 6 and 10 would be allowable if rewritten in independent form.

It is noted that box "10" on form PTOL-326 is checked, though it is not indicated whether the drawing originally filed with this application are objectionable or are acceptable. It is believed that the originally submitted drawings are acceptable. If the undersigned's understanding is incorrect, the Examiner is kindly asked to so indicate.

Minor amendment are made to original Claim 1 solely for stylistic purposes without narrowing the claim scope.

The subject matter of this application pertains to a form-and-seal unit for a machine used to package pourable food products. Before considering the form-and-seal unit set forth in the original claims of this application, the following brief overview of the general subject matter disclosed in this application is provided.

The background portion of the present application describes known types of machines for packaging pourable food products, and points out that it is oftentimes desirable to adapt such machines to produce packages of different volumes. However, this typically requires significant alterations to the machine, involving for example replacing the forming flaps on the jaws and/or other parts, and subsequently adjusting aspects of the modified machine. As the present application points out, this can be somewhat time consuming and expensive.

The form-and-seal unit for a machine used to package pourable food products as described in the present application includes forming assemblies 5, 5` which interact alternately with the tube 2 of packaging material. The forming assemblies 5, 5` each comprise a pair of jaws 7 provided with sealing elements 13, 14, with the jaws being movable between an open position and a closed position in which the sealing members cooperate with the packaging material tube. In addition, respective forming flaps 21 are carried by each of these jaws, and are movable between a withdrawn position in which they do not cooperate with the packaging material tube, and a forward position in which the forming flap surround the tube. In addition, a cam-follower means 30 is carried by the forming flaps 21 and cooperates with a fixed cam means 25 to control the movement of the forming flaps from the withdrawn position to the forward position.

The form-and-seal unit here makes it possible to select forming flaps from a number of different types of forming flaps that differ in size for producing respective types of packages, without the need for changing the fixed cams to accommodate and appropriately control the movement of the forming flaps of different sizes. This is made possible by virtue of the fixed cams (cam means) 25 being provided with different work profiles 37, 38 that are selectively engageable by the cam followers (cam follower means) 30 of different types of forming flaps. Thus, the movement of the forming flaps is controlled by the fixed cams having different work profiles that are selectively engageable by cam followers depending on the type of forming flaps used. It is thus possible to vary the volume of packages being produced by simply changing the forming flaps which are differently configured for the specific type of package being produced.

Independent Claim 1 defines that the form-and-seal unit for producing aseptic seal packages of a pourable food product from a packaging material tube filled with the food product comprises a fixed structure, and forming means which interact cyclically with the packaging material tube. The forming means comprise two pairs of jaws having sealing means for sealing the tube of packaging material and movable between an open position and a closed position in which the sealing means cooperate with the packaging material tube. Respective forming flaps are carried by the respective jaws and have half-shell forming portions, with the forming flaps being movable between a withdrawn position in which they do not cooperate with the packaging material tube and a forward position in which the forming portion surrounds the packaging material tube in the closed position of the jaws. In addition, cam-followers means is carried by the forming flaps and cooperates with fixed cam

means to control the movement of the forming flaps from the withdrawn position to the forward position. The forming flaps are selectable from a number of types of forming flaps differing in size for producing respective types of packages, and the fixed cam means define different work profiles selectively engageable by the cam-follower means depending on the type of forming flap used.

The Official Action sets forth a rejection of independent Claim 1, and most of the original dependent claims, based on the disclosure in U.S. Patent No. 6,543,205 to *Faskhoody et al.* This document discloses a form-and-seal unit that includes forming flaps 21 hinged to respective jaws 7. The movement of the forming flaps 21 towards the tube 2 of packaging material is controlled by two fixed cams 56 that interact with rollers 39 of the respective forming flaps 21. Each of the cams 56 comprises two identical work profiles 57 defined by a curved concave top input portion 58, a straight, vertical intermediate portion 59 and a straight inclined output portion 60.

The Official Action states that the fixed cams 56 in *Faskhoody et al.* corresponds to the claimed fixed cam means. It is respectfully submitted that such conclusion is not supported by the disclosure in *Faskhoody et al.* First, it is relevant to note that the claimed form-and-seal unit in Claim 1 comprises the forming flaps which are selectable from a number of types of forming flaps differing in size for producing respective types of packages. Claim 1 also recites that the fixed cam means define different work profiles selectively engageable by the cam-follower means depending on the type of forming flaps used. In other words, the different work profiles of the fixed cam means are engageable by the cam follower means of

different types of forming flaps that differ in size to produce respective types of packages.

The fixed cams 56 in *Faskhoody et al.* do not define different work profiles selectively engageable by the cam followers of forming flaps of different types that vary in size to produce respective types of packages. Indeed, *Faskhoody et al.* does not envision that the fixed cam means 56 are usable with forming flaps selectable from a number of different types that differ in size, and does not disclose that the fixed cams 56 are capable of operating different types of forming flaps that differ in size for producing respective types of packages. With forming flaps of different types that differ in size for producing respective types of packages, the fixed cams require different work profiles that cooperate with the cam followers of the different types of forming flaps to control the movement of the forming flaps between the withdrawn position and the forward position as claimed. The fixed cams 56 in *Faskhoody et al.* do not include different work profiles that, through cooperation with the cam followers of the forming flaps, are able to control movement of different forming flaps that differ in size between the withdrawn position and the forward position. It is thus respectfully submitted that the anticipatory rejection of independent Claim 1 based on the disclosure in *Faskhoody et al.* is inappropriate and should be withdrawn.

Submitted with this Amendment are new independent Claims 11, 15 and 19. New independent Claim 11 defines that the form-and-seal unit comprises, in combination with the other claimed features, cam-followers carried by the forming flaps and engageable with respective work profiles of the fixed cam to control movement of the forming flaps from the withdrawn position to the forward position, wherein the work profiles of the fixed cam comprise first and second pairs of work

profiles that are spaced different distances from the vertical longitudinal plane, with the vertical longitudinal plane being the plane about which the two spaced apart guides are symmetrically as discussed in the top half of page 11 of the present application. Claim 11 further recites that the first pair of work profiles are engageable by the cam followers of two forming flaps of a first type while the second pair of work profiles are engageable by the cam followers of two forming flaps of a second type, the latter differing in size relative to the former.

The fixed cam 56 disclosed in *Faskhoody et al.* does not include first and second pairs of work profiles that are spaced different distances from the vertical longitudinal plane or so as to be engageable by the cam followers of forming flaps of different types that differ in terms of size.

New independent Claim 15 defines that the form-and-seal unit comprises, together with the other claimed features, a fixed cam formed as a flat plate, and cam-followers carried by the forming flaps and engageable with respective work profiles of the fixed cam to control movement of the forming flaps from the withdrawn position to the forward position. In addition, Claim 15 recites that the work profiles of the fixed cam comprise first and second pairs of work profiles which differ in size from one another as discussed in the second full paragraph on page 11 of the present application. The first pair of work profiles is offset from the second pair of work profiles in this thickness direction of the cam-forming flat plate, with the first pair of work profiles being engageable by the cam followers of two forming flaps of a first type to control the approach movement of the two forming flaps of the first type towards the tube, and the second pair of work profiles being engageable by the cam followers of two forming flaps of a second type, differing in size relative to the

forming flaps of the first type, to control the approach movement of the two forming flaps of the second type towards the tube.

In *Faskhoody et al.*, the fixed cam 56 is a flat plate, but does not include a first pair of work profiles, engageable by the cam followers of two forming flaps of a first type, and a second pair of work profiles, engageable by the cam followers of two forming flaps of a second type, wherein the first and second work profiles differ in size and are offset from one another in the thickness direction of the cam 56.

New independent Claim 19 defines that the form-and-seal unit comprises a pair of fixed cams located on opposite sides of the forming means, and a pair of cam-followers carried by each of the forming flaps and cooperating with the fixed cams to control the movement of the forming flaps from the withdrawn position to the forward position. The claim recites that the forming flaps are selectable from a number of types of forming flaps of differing size for producing respective types of packages. The claim further sets forth that each of the fixed cams possesses a first pair of work profiles engageable by the cam-followers of two forming flaps of a first type to control the approach movement of the two forming flaps of the first type towards the tube and a different second pair of work profiles engageable by the cam followers of two forming flaps of a second type different from the forming flaps of the first type to control the approach movement of the two forming flaps of the second type towards the tube.

Thus, Claim 19 recites that the fixed cams each comprise a first pair of work profiles engageable by the cam followers of a first type of forming flaps to control the approach movement of the two forming flaps towards the tube, and a different

second pair of work profiles engageable by the cam followers of a different second type of forming flaps to also control the approach movement such forming flaps.

Faskhoody et al. does not disclose different work profiles of the fixed cams 56 that control the approach movement of forming flaps of different types. Each of the fixed cams 56 in *Faskhoody et al.* include only a single pair of work profiles that control the approach movement of the forming flaps.

The dependent claims define additional distinguishing features associated with the claimed form-and-seal unit. As these claims depend from allowable independent claims, a detailed discussion of the additional distinguishing aspects of the claimed unit set forth in the dependent claims is not set forth at this time.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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